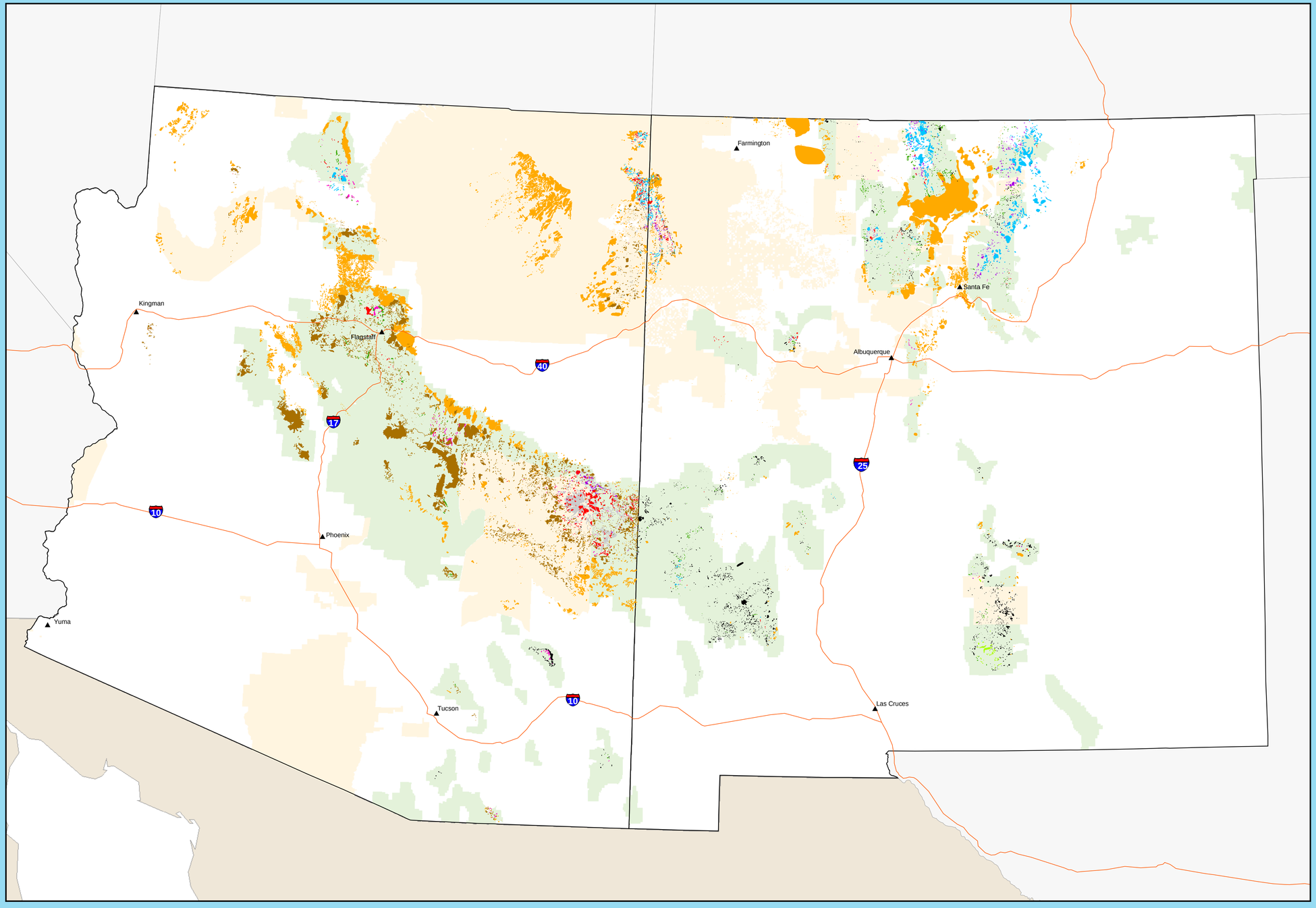

National Forest lands

Tribal lands

Damage Agent*

- Ips engraver on ponderosa pine
- Western pine beetle/roundheaded pine beetle
- Spruce beetle
- Piñon ips
- True fir mortality from bark beetles
- New Mexico fir looper
- Western spruce budworm defoliation
- Aspen defoliation
- Spruce aphid
- Douglas-fir beetle

**Only agents affecting greater than 5,000 acres Region-wide are depicted.*

N W E S

0 25 50 100 150 Miles

The insect and disease activity depicted here is based on aerial detection surveys and should only be used as a general indicator of incidence. This map represents only the mortality and defoliation that occurred in 2003. Depending upon the timing of survey, the entire extent of some insect and disease activity may not have been detected. Intensity of damage is variable, thus not all trees within a mapped area are dead or defoliated. Caution should be used in interpreting these results due to the subjective nature of aerial sketch mapping and the scale of mapping. Areas of particular concern should be ground-checked for precise determination of location and casual agent.

Arizona

Survey conducted July through October 2003, by Steve Dudley and Bobbe Fitzgibbon, Forest Health, Arizona Zone Office, Southwestern Region, USDA Forest Service, and Tom DeGomez, University of Arizona, Arizona Forest Health Program. Additional surveys for piñon mortality conducted in September by Jeff Moore, USDA Forest Service.

New Mexico

Survey conducted June through September, 2003 by Richard Norris, Forest Health, New Mexico Zone Office, Southwestern Region, USDA Forest Service. Additional surveys for piñon mortality conducted in March, and August through September by Craig Daugherty and Todd Haines, New Mexico Forestry Division; Terry Rogers and Daniel Ryerson, Forest Health, New Mexico Zone Office, Southwestern Region, USDA Forest Service.

Significant Forest Mortality and Defoliation Detected through Aerial Survey

Southwestern Region - 2003

FOREST SERVICE US DEPARTMENT OF AGRICULTURE

Februrary 20, 2004